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Spring-Flowering Bulbs.

AT this season, when all the air is filled with the fragrance of ripening fruit, and flowers are still blooming in mid-summer abundance, it is difficult to recall the impression made on the mind by the hardy flowers that begin to appear, one after another, under the first genial influences of early spring. After the long northern winter, any evidence of renewed life is welcome, and early flowers could not fail to give delight for the cheerful promise which they bring, if for no other reason. But apart from this appeal to the imagination, and from the fact that they have few rivals, spring flowers in themselves are among the most beautiful which the year has to offer; so that every one who has any appreciation of grace and delicacy in form and color takes especial satisfaction in a spring-garden. The testimony is universal that one who plants a spring-garden provides himself and his friends with a store of unfailing and ever-increasing pleasure.

These thoughts are seasonable, for the time is at hand when preparations for spring flowers must be made, if we are to have them at their best, Without mentioning the hundreds of other flowers that have been spoken of in these columns earlier in the year as they came into bloom, we wish especially to call attention to the endless variety of bulbs in which the flowers for next year's bloom are already stowed away. Snowdrops and Squills, Snowflakes and Crocuses, Fritillaries and Erythroniums, Daffodils, Jonquils, Chionodoxas, Satin Flowers and many more—most of them in endless variety—should be secured early, or the dealers will have nothing but refuse stock to offer. It is true that most of these will bloom if not planted until November, but many of them lose their vitality when kept too long out of the ground. Those who wish to deal directly with the great bulb-growers of Holland, or to secure rare varieties from specialists, have no time to lose. Careful study of the catalogues should begin at once, for at least six weeks will elapse between the sending of orders and the arrival of the bulbs. The middle of October is late enough to plant any of them, and most of them will become better established if planted in September.

Even in our wild February weather the fragile Snowdrop will often pierce the frozen soil and open in a sunny exposure, and, if a proper selection of bulbs is made, flowers can be had in constant succession through all the spring months, until the summer Irises appear. Now is the time to choose a proper position for each according to its habit. Most of the earlier and more delicate ones are out of place in masses or formal beds. Snowdrops, for example. can be snugly placed under the shelter of a wall or a boulder in the rock-garden. Tall Squills like *S. campanulata* are at home in the grass, which may be a foot or more high when they bloom. Daffodils will grace the borders of a woodland path. Yellow Crocuses are beautiful on the turf, as they open just as the grass is warming into tender green. Gay garden Tulips and Hyacinths are quite too civilized for nooks in the wild garden, but some of the species of Tulips, especially those of recent introduction, are not misplaced on the border of shrubberies, or in pockets of the rock-garden. There is no spot in wood or meadow, by the brookside or byway, among the rocks, or in a trim enclosure, where some of these flowers cannot be placed to advantage.

None of these spring-flowering bulbs are more generally appreciated than the almost numberless species and varieties of the Narcissus. The single Daffodil opens early in April, with the Bloodroot, and for six weeks some member of the family will be in bloom. Latest of all, and hard after the beautiful *N. biflorus*, comes the Poet's Narcissus, the hardiest and most useful of all. No flower is more effective in the border, in the rock-garden, or as an edging to the shrubbery. It can be naturalized even in a hay-field, and it never appears more beautiful than when shining among the grass, as in our illustration on page 427, which gives a view on private grounds not far from Boston. The foliage should remain till the bulbs have ripened well, and this is true of all other bulbs; but long before the grass is fit for the scythe the tops will have died down out of the way, and the bulbs will have multiplied for fresh flowers another spring. The Poet's Narcissus is not particular about soil or exposure. but it will multiply more rapidly in a deep, rich soil, and gratefully repay kind treatment. Many varieties have been produced by crossing and selection, which are interesting to those who take pleasure in noting minor distinctions among flowers, but for general effect none of them are superior to the original type, which can be bought for a trifle, and a few of them planted every year in vacant corners will soon furnish an abundant supply. Like most species of Narcissus, they do better when planted early, and then, if the soil is suitable, they only need to be protected from the ravages of the lawn-mower to keep on spreading and flowering year after year. No one ever had too many Poet's Narcissus or other spring bulbs of that adaptable kind which will brighten up out-of-the-way nooks in unkept parts of the garden, and no one ever enjoyed such flowers in full measure until he has seen them scattered along the wayside or among the grass, or grouped naturally in a wood border.

In an article on "The Lesson of Conemaugh," in the *North American Review* for August, Major J. W. Powell, Director of the United States Geological Survey, says that "wherever the chief precipitation is snow, forests are a disadvantage if the waters are needed in the valleys below for irrigation, for the forests keep the snow distributed over broad areas of ground and expose it to the winds on their trunks, branches and leaves, so that altogether the mountain evaporation is enormously increased as compared with the evaporation from snow-drifts and ice-fields." If there have been measurements which show that forests enormously increase evaporation, the facts would have a scientific interest for students of forestry, and we should be glad to see a full report of them. But whatever the loss of water from such evaporations may be, the extinction of mountain-forests usually involves the destruction of the mountains themselves, and of the streams which flow from them. If the forests are destroyed there will soon be no possibility of controlling and utilizing the water from the

denuded hills. Under such conditions the question of a greater or less quantity of water dissipated by forest evaporation is not important. The forests are an indispensable factor in a system of irrigation by mountain streams.

Major Powell adds that in low mountain and hilly regions of humid lands, forests about the sources of the streams are of advantage, because they "serve to hold back the water and thus equalize the flow through the year and greatly mitigate the floods." That is a very good statement of an important truth, and the forests will perform this office just the same whether the precipitation is chiefly snow or not, and for any kind of country, humid or arid, where forests can grow. The evil, difficulty and danger of this whole matter are in the fact that the disastrous changes which result from the destruction of mountain forests do not take place immediately, or with the spectacular suddenness of scene-shifting on the stage. When the country is obliged to recognize the fatal and irretrievable consequences of the extinction of the mountain forests of California and Colorado, the men who are now clamoring for their destruction will have gone out of sight, and we shall all be silent. But a civilized nation should be capable of foresight, of learning without the lessons of experiments so disastrous and fatal. It is matter of regret that Major Powell and the admirable young men associated with him are not more vitally interested in the preservation of these important forests. Their indifference gives aid and comfort to the enemies of their own work, and of our national civilization.

The Art of Gardening—An Historical Sketch.

IX.—Greece.

THE history of the few nations which we have already passed in review is enough to show that a stronger or weaker feeling for natural beauty was never the only cause which affected the development of gardening art. The literature of the Jews, for instance, proves that they had an exceptionally deep and poetic feeling for the beauty, grandeur and mystery of the inanimate world; but their gift for art was small, and they were not wealthy or addicted to luxurious living. In consequence, their use of gardens was comparatively restricted, while the Phœnicians, who were akin to them in lack of artistic capability, and were doubtless as inferior in a sentiment for nature as we know them to have been in moral intensity, practiced gardening more generally, because they were a richer and more pleasure-loving people.

As I tried to show in my last chapter, the Greek was not so devoid of a love for the beauties of nature as is commonly said. He may well have loved it in an equally poetic and an even purer way than the Persian, and he was certainly the superior of the Roman in this respect. If, then, his gardens were less extensive than those of Persia and of Rome, we must look elsewhere for the reason. In this case, of course, it cannot be found in artistic inaptitude. It lay partly in the fact that the Greeks were not a rich people and they were not ruled by kings and courtiers; but chiefly it lay in the fact that above all other men they were the exponents of action—of the constant, vigorous exercise of body and mind. The game of politics was their diversion, not hunting or feasting as with the Persians; the hippodrome, the theatre and the gymnasium were their favorite refuges from care, not the country home which so strongly attracted the Roman of the Augustan Age.

The Greeks got their first impulse towards the creation of gardens from Persia. In the early periods of their existence they had neither villa gardens nor stately city squares. Domestic life in the modern sense hardly existed, nor social life in the Persian sense; men met in public to exercise or discuss, not to enjoy themselves in idleness, and they went to their homes for scarcely more than to eat and sleep. Of course there were sacred groves around their temples, but these—the common property of all ancient nations—were religious, not artistic, in their origin. Even such a picture as Homer paints when he makes Nausicaä say to Odysseus that he will

> "A never-felled grove find, that poplars crown,
> To Pallas sacred, where a fountain flows;
> And round about the grove a meadow grows
> In which my father holds a manor-house,
> Decked all with orchards, green and odorous,
> As far from town as one may hear a shout,"*

—even so simple a picture as this can hardly have had its prototype in Greece when Homer wrote. He must have seen such homes on the Ionian coast, where Persian influence worked towards beauty and luxury at a much earlier day than in the peninsula itself. And all his other pictures of gardens suggest little more than useful plantations—orchards, vineyards and vegetable gardens.†

Cimon, we are expressly told by Plutarch, was the first who adorned Athens with gardens, and the influence of Persia was very potent in his day. He "first embellished the upper city with those fine and ornamental places of exercise and resort" which the Athenians "afterwards so much frequented and delighted in. He set the market-place with Plane-trees, and the Academy, which was before a bare, dry and dirty spot, he converted into a well-watered grove, with shady alleys to walk in and open courses for races." Doubtless the state in which Cimon found the Academy was the result of the Persian invasion; it must have been an agreeable spot when the Pisistratidæ were in power. But Plutarch's words suffice, at all events, to show that Cimon did more than had been done previous to his time. As described in later years, the Academy—which lay in the suburb Ceramicos—was surrounded by a wall and contained marble canals, fountains, long alleys, chiefly of Plane-trees, and narrower walks, called "philosophers' walks," embosomed in shrubbery, all thickly intermingled with architectural and sculptural forms. In addition to the main buildings, there were small temples and altars, and statues without number; colonnades, pavilions, and isolated seats for repose; and a long, oval, marble-bordered race-course.

On the north bank of the Ilyssus was another similar resort, the Lyceum, with an exceptionally fine colonnade of marble decorated with paintings. Here Aristotle taught, as Plato had taught at the Academy. And at a third "gymnasium," called the Cynosarges, laid out for the use of half-Athenians and foreigners, Antisthenes taught in later days, and from its name, most likely, his scholars got their name of "Cynics."‡

Such were the places which, for the Athenian, represented the splendid palace-gardens and hunting-parks of the Persian. Beautiful they were, of course, but with an architectonic rather than a natural charm—scarcely gardens at all in the modern sense, for by no means places for repose and contemplation. Much the same was the magnificent "sacred grove" called Altis which surrounded the temple at Olympia—a "forest of bronze and marble statues," a veritable city of lovely buildings, embosomed in trees and set about with flowering plants. Carthage, too, had her public gardens, where marble and foliage met on equal terms; and even in rigorous Sparta the young men exercised beneath the shade of gigantic Planes.

The form which the private dwelling assumed in the cities of Greece is too well known to need description. Even in early times, no doubt, its courts were planted or adorned with flowering odorous shrubs in pots. Fruit and vegetable gardens must also have been commonly attached to dwellings of any pretension, and perhaps small flower gardens for the delight of the secluded wives. But only when in the age of Pericles power and wealth came in unprecedented measure to Athens do we read of pleasure-gardens in any wider sense. Domestic life, as we understand the term, still hardly existed; but the wealthy courtesans who met the men on equal terms, social and intellectual, possessed beautiful gardens in which much of their life was passed; and the famous "symposia" were usually held in gardens or in open colonnades facing a verdurous, shadowy enclosure. Now, too, we hear of gardens on the flat roofs, and of the importation of exotic plants to be cultivated in wooden boxes or woven baskets, or even in vases of silver, or of clay made still more precious by the touch of art. Gradually a line of villas with gardens behind them stretched out of the city almost as far as Eleusis; and, it is said, few hedges or walls separated one property from another, but the prospect was everywhere open and harmonious. The garden of Phryne is mentioned with especial praise, and Epicurus possessed a famous one near the Academy, where, in a favorable environment, he instructed his scholars in the philosophical system which bears his name. Pliny, indeed, says that "Epicurus, that connoisseur in the enjoyments of a life of ease, was the first to lay out a garden at Athens; up to his time it had never been thought of to dwell in the country in the middle of the town."

New York. *M. G. Van Rensselaer.*

*Chapman's translation.

†"Of the gardens of Hesperides we know nothing singular but some golden apples. Of Alcinous, his garden, we read nothing beyond figgs, apples and olives. The gardens of Adonis were so empty that they afforded proverbial expression, and the principal part thereof was empty spaces with herbs and flowers in pots."—*Sir Thomas Browne.*

‡Vitruvius's famous restoration on paper of the Athenian Academy cannot be accepted as correct.

The Sugar Maple and Maple Sugar.

A FORCIBLE writer has aptly said: "Timber trees declare a dividend only at death, and there is constant and strong temptation to their destruction. The Sugar Maple declares annual dividends and the tree survives." It is difficult to induce men to plant or protect trees by urging their beauty or usefulness in modifying the climate. But in the case of the Sugar Maple a direct argument can be addressed to the pocket of the farmer. The value of the Sugar Maple, and the rare delicacy and excellence of the product derived from it, is so great, in my view, that on my own farm, a fertile and productive one, there is no portion which yields more satisfactory returns than does a forty-acre sugar-bush. Nor am I alone. Mr. Eugene Davenport, of Woodland, Michigan, states, states that his forty-acre sugar-bush pays a net profit of twelve per cent. on a high valuation. I believe he has not overstated the facts. There is a delicacy of flavor about Maple syrup that is equalled by no other sweet. Art cannot counterfeit it, and from the nature of the case it will always be a luxury. Therefore, we can count on a ready market at a high figure for a product that can never be depreciated by excessive competition.

Many persons make a mistake in clearing out too thoroughly the underbrush from the sugar-bush. We must remember that trees grown in thick forests have been protected by neighboring trees and brush-wood from the severe winds, and so have not deep running roots to resist the heaviest blasts. If, then, we cut away the other trees and the undergrowth, we shall almost certainly loose our trees. I thin out trees and undergrowth very sparingly, and have lost very few. Others pasture their sugar-lot. This should be done with caution. I have turned sheep into my lot, but they are watched very carefully, for it is my aim to protect the young Maples. And if the old trees, which have now been tapped annually for more than fifty years, should show signs of decline (they do not as yet), I shall have a vigorous young grove to tap instead of the old one.

No rule can be given as to date of tapping. For the past few years about the 20th of March has been a good time to begin in this latitude. The tendency is to tap too early. The evil of this is that the cut dries up, and when the season does fully open, it is not in condition to yield the best returns.

In early times we used to cut an oval in the tree with an axe. This was often two by four inches in diameter. A terrible wound, yet some of my best trees of to-day were tapped in this way for years, and stand as monuments of Nature's recuperative power. We next used a two-inch augur, cutting about half an inch deep, and, as before, cutting a second gash just below for a spout. This, though an improvement, was still a cruel practice. The wonder is that the trees stood it as they did.

We now use a half-inch curved-lip bit, which cuts a very smooth hole. We bore from one and a half inches to two inches in depth. While science seems to have demonstrated that depth, not size of hole, measures the amount of sap, yet experience in my bush proves that a two-inch hole gives more sap than a half-inch cut, though not enough more to warrant the larger wound.

If we desire to secure the very finest article, we must exercise great care and absolute neatness. The best spout is a close-fitting metalic one, which also holds the bucket. The buckets should be of tin, should "nest" or have flaring sides, and should hold not less than fourteen quarts. The bucket has a small hole through the side close to the top, by which it hangs to the spout. The past year I have used two spouts to a bucket, one passing just over the rim. Hereafter I shall use two spouts to all but my smallest trees. I use an inch pine cover, one foot square, to each bucket. It is painted red on one side and white on the other. The cover keeps out all filth, rain and snow from the sap, and is a very great aid in gathering. As we turn the covers each time we can see for rods by the color if we have gathered the sap from any bucket.

Sap contains cane-sugar, which varies in amount with the tree. I think the average is about one pound to four gallons of sap. The best syrup—that which has sufficient consistency to please the palate, and yet is not so thick as to crystalize in the cans—weighs eleven pounds to the gallon when hot. We aim to have all our syrup of this exact weight. It takes about thirty-five gallons of sap to make one gallon of such syrup. To make the finest sugar or syrup requires great neatness and dispatch. Any dirt affects the color, and possibly the flavor, and therefore the sap is strained through cloth at least three times. Delay in reducing sap to syrup or sugar affects both color and flavor. I suppose that ozone colors the product, just as it colors a piece of cut-apple. Thus long exposure is to be avoided. Again, delay, especially if the weather is warm, and if the greatest neatness has not been observed, induces fermentation, which changes the cane-sugar to grape-sugar. This injures both color and flavor decidedly. Could all sap be taken just as it oozes from the tree, and converted quickly into syrup or sugar then, we would always have a product nearly water-white and of the highest flavor. In the syrup there is a variable amount of malate of lime. Often this is almost absent. Sometimes we get a pint in reducing six or seven gallons of syrup. This lime malate often incrusts the bottom of the evaporator, and gives much trouble. I use an evaporator so arranged that the back-pans (all are connected by siphons) can be changed each day, and there is no trouble from these incrustations. In other evaporators, if the bottom of the pan at the very back end be occasionally scraped with a pine paddle the lime is said not to trouble. When the syrup is strained through factory-cloth, much of the lime is removed. The syrup then stands for half an hour, when the lime so settles that but little is left in the liquid, if carefully turned off. This is at once sealed, while hot, in air-tight cans.

We have a very neat house in which to boil the sap. Even the wood house is separate from the boiling room so as to save or prevent dust. The "Champion" evaporator reduces very fast. Mine is twelve feet by four, and will manage the sap for 800 trees. It consists of four separate pans connected by siphons. We run off the syrup once every three hours, about seven gallons at a time, and this rapid work helps to make a very fine article.

Trees vary much in the amount of sap they yield. Sound, vigorous, large, and heavy-topped trees are the best. Seasons differ exceedingly. What we need for sap is a cold night, freezing the ground, followed by a warm, still day. The season that has many such days will be a good one. Sap from different trees varies in sweetness. Sap late in the season is usually sweeter than that which runs earlier. Sap which runs rather slow is richer than when it runs very fast. Trees tapped on the south-west side run fastest early in the season; those on the north-east excel later. The sap is all equally good till the buds start, when the syrup will be rank both in taste and odor. The old idea that the first run was best came from the fact that the buckets then were all neat and clean. It is important to wash out the buckets often with warm water, so as to prevent any possible fermentation.

Agricultural College, Mich. *A. J. Cook.*

Notes Upon Some North American Trees.—VIII.

129. CRATÆGUS TOMENTOSA, L.—This is one of the best marked and least variable of the North American Thorns. It may be readily distinguished by its large, ovate-elliptical leaves three to four inches long, narrowed at the base into a margined petiole, doubly serrate and sometimes incisely cut towards the apex, glabrous, dark green and lustrous on the upper, paler and covered with soft pubescence on the lower surface; by the spreading, loose, pubescent corymbs of rather small flowers and by the small oval fruit, rarely more than a third of an inch long and always *upright*. It may be distinguished from all the varieties of *C. coccinea* by the absence of glands, and by the pale gray bark of the branches, which are generally unarmed. The thorns, when they do occur, are short and stout and of the same color as the branches. This species, with which a variety of *C. coccinea* is often confounded, does not occur in New England, or, so far as I know, anywhere east of the Appalachian Mountains; it is common in western New York, extends through southern Michigan to Missouri, where it is very common, and as far south as east Tennessee and Georgia. It is the latest of all our Cratægus to flower, with the exception of *C. cordata*; and the flowers emit an exceedingly disagreeable odor. This species is admirably figured in the "Arboretum Segrezianum," *l. 22*, under *C. leucocephalus*; and there is a doubtful figure in the "Botanical Register," xxii., 1877, under *C. pyrifolia*. But as these works are not very accessible, Mr. Faxon has drawn the figure, which appears on page 425 of this issue, which may serve to call the attention of botanists to this plant. I shall be glad of information of its geographical range, especially in Pennsylvania and in the states west of the Alleghany Mountains and south of the Ohio River. The specimen in the Linnæum herbarium fixes the identity of this species and

settles, so far as concerns the oldest name, its rather complicated synonomy.

The plant which has been sometimes considered a variety of this species (var. *punctata*, Gray, Manual, 2 ed. 124.—Census Cat., 80) is, certainly, quite distinct from it, and one of the best marked and least variable of our species, always readily distinguished by the prominent primary veins of the leaves, and by the large, dull red or bright yellow pendulous fruit covered conspicuously with white dots. This plant is common in Berkshire County, Massachusetts; it extends west to Ontario, and southward along the Alleghany Mountains to the high peaks of North Carolina. The name which has been usually applied to it is that of Jacquin, *C. punctata* (Hort. Vindob., i., 10, *t.* 28), published in 1770; and this name can be retained, as the *Mesiplus cornifolia* of Munchhausen (Hausv, v., 145) is of the same date.

130. CRATÆGUS CORDATA, Aiton.—Walters name, *C. populifolia* (1788), is taken up in the recent Catalogue of the plants of New York in the place of that of Aiton (1789). The oldest name for this tree, however, is *Mesiplus cordata*, Miller, "Figures of the most beautiful, useful and uncommon plants described in the Gardeners' Dictionary," *t.*, 179 (1760), and "Gardeners' Dictionary," ed. 8, so that the oldest specific name being used it is fortunately possible and proper to retain the familiar *C. cordata.*

133. CRATÆGUS BERBERIFOLIA, Torrey and Gray.—This species, published in the "Flora of North America," i., 469, in 1838, had been discovered by Professor Carpenter on the prairies of Opelousas, in western Louisiana. Little was known of it, as the specimens were gathered after the petals had fallen and before the ovaries had grown perceptibly, and nothing more was seen of this plant until the spring of 1880, when I found it in eastern Texas, not very far from the original locality. I visited Opelousas for the third time four years ago, and fortunately met with the tree on the very spot, probably, where Professor Carpenter had discovered it fifty years before. The trees at this time were only in bud, but later, through the kind offices of Dr. Mohr, of Mobile, I obtained copious flowering and fruiting specimens and an abundant supply of seeds, which have been distributed among the principal European gardens.

An examination of this plant both in the field and in the herbarium makes it clear that it must be considered a pubescent form of *Cralægus Crus-galli.** The Louisiana trees have the habit of *C. Crus-galli*, with the peculiar horizontally spreading branches, making the low, flat-topped head of that species. The bark is identical in the two trees, and I find no characters, except in the pubescence of the young shoots, of the leaves and of the inflorescence to distinguish it from the ordinary broad-leaved form of the Cockspur Thorn. The plant was described as unarmed in the "Flora of North America," but I have, thanks to Dr. Mohr, who purchased Dr. Carpenter's herbarium, one of his original specimens, which has stout, straight spines an inch and three-quarters long; and branches may be found on the same tree covered with thorns, or entirely unarmed. The fruit is ornamental, half an inch in diameter, and orange with scarlet cheeks. This plant grows quite abundantly about four miles west of Opelousas, on ground adjoining the plantation of a Mr. Pierre Pompon Petre. It is found among an open growth of Oaks and Hickories, associated with Hornbeams, Flowering Dogwoods and the Parsley Haw, close to the margin of the prairie, which is here bordered with a most luxuriant growth of the beautiful *C. brachyacantha.* Dr. Mohr sends what is evidently the same plant, collected on Black Creek, west Florida, in 1882, and Mr. Faxon, in 1885, found at Augusta, Georgia, *C. Crus-galli* with pubescent shoots and leaves which cannot be separated from the Louisiana plant. *C. Carrierei*, of which *C. Lavallei* is a synonym—a seedling which sprung up in the garden of the Museum d'Histoire Naturelle, at Paris, is the same as our plant, except in its less developed pubescence.

135. CRATÆGUS FLAVA, Ait.—This, according to Karl Koch, is the *Mespilus flexispina* of Moench (Verzeichniss ausländischer Bäume und Stauden des Lustschlosses Weissenstein bei Cassel, published in 1785). I have not this work before me, but if the reference is correct, the specific name of Moench must replace that of Aiton, which was not published until four years later, and *C. flava* become *C. flexispina*—a change which is less objectionable than many others, as the fruit is never quite yellow, and more often red than yellow-green. *C. S. Sargent.*

*CRATÆGUS CRUS-GALLI, var. *berberifolia*, arbor mediocris, ramulis horizontalibus, hornotinis pubescentibus, foliis oblonge cuneato-obovalibus, superne serratis subtus dense pubescentibus, 2-poll-longis; corymbis dense hirsutis.

Foreign Correspondence.

London Letter.

AUGUST is usually the interval between the summer and autumn crops of roses, while as a rule it is too early for Dahlias and other autumn flowers. But this year, owing, probably, to a fine and warm early summer and an abundance of rain lately, our open air gardens are particularly gay with flowers, and the Royal Horticultural Society's show in mid-August was brighter and more crowded than I remember to have seen it at this season. The hall was lit up with masses of Dahlias, Gladioli, Roses, Carnations, Java Rhododendrons, Begonias, Orchids, a host of border flowers, specimens of hardy and ornamental trees and rich collections of fruits, including a marvellous array of Tomatoes from the Society's gardens. Here was a feast to suit all sorts and conditions of gardeners, but there was but a handful of admirers after all, and all these directly interested. The real flower lovers are those who have the best and most richly stocked gardens, and go to exhibitions only to see for themselves what is new and good.

There was an unusually large number of novelties at the meeting, and amongst them were some first-rate plants, and I was glad to see the new *Vanda Kimballiana*, shown splendidly by Sir Trevor Lawrence and Messrs. Low. It is, without question, a lovely Orchid, and a valuable addition to the small number that flower in late summer. The plants exhibited differed somewhat from those I saw before, the sepals being almost pure white, while the trilobed labellum was of a vivid crimson purple. The flower reminds me much of the pretty *V. Hookeriana*, being similar in size and form. Some of the specimens shown bore as many as seven flowers and buds. I hope it will prove a good grower, but the rounded quill-like leaves do not indicate robust growth. It was, of course, honored with a first-class certificate, as was also a new Cypripedium from Baron Schroeder's collection. This was *C. orphanuu*, supposed to be a cross between *C. Drurii* and *C. barbatum.* It is handsome, but much resembles several other hybrids, *C. Harrisonum superbum*, for instance. It is one of the finest of its class, and will delight specialists in Cypripedia. A far finer hybrid is that named *C. Stoneo-superbiens*, indicating a cross between these two species. It so nearly resembles the beautiful hybrid named after the late Mrs. Morgan that it was re-labeled *C. Morganiæ.* The parentage of both hybrids is the same, and there might be, perhaps, some slight variation in form and color. It is the nearest approach among hybrid Cypripeds to the unique *C. Stonei platytænium*, and some look upon it as really handsomer, and certainly it is more free in growth and flower. The long, broad and drooping lateral sepals, richly spotted with black on a pale ground, gives distinction to the hybrid, while the rest of the flower partakes of the features of *C. Stonei.*

A great treat for Orchidists was a specimen of the grandest of all Cattleyas, *C. Hardyana*, which, when first exhibited, was supposed to be a natural cross between *C. gigas* and *C. Dowiana aurea*, but probably it is only an extraordinarily fine variety of *C. gigas*, or, as it is now called, *C. labiata Warscewiczii.* The flowers are as large and as fine in form as any variety of *C. gigas;* the sepals and petals are a very rich and bright rose-purple, while the broad labellum is of an intense crimson magenta, and adorned with two large blotches of bright yellow, and netted with the same color. This grand Orchid is still very rare, and probably does not yet exist in American collections. It is said to have cropped up, in a few instances, from gatherings of imported plants of *C. gigas.*

Among the other choice Orchids shown was a fine example of the blue *Saccolabium cæleste*, a small-growing species with short, dense spikes of exquisite little flowers, violet-blue and white; *Lælia monophylla*, of the size of *Sophronitis grandiflora*,

and with similar flowers of a brilliant orange-scarlet, and the rare little *Oncidium triquetrum*, with modest little flowers of no great beauty. The Marquis of Salisbury's gardener contributed about a dozen spikes of *Saccolabium Blumei*, from eighteen inches to two feet in length, with glorious wreaths of tiny blossoms of lovely color and form and delicious fragrance. On seeing such Orchids as these one can understand how eaptivating they are to the public, who value flowers for what they are, and not for their rarity or money value.

so tasselled at the points as to make it quite different from the well-known old favorite. It received a first-class certificate, and it well deserved it.

Among the large number of florists' flowers, only those of superlative merit received awards. Most interest centred in a splendid collection of new Gladioli of M. Lemoine's raising, and shown by Messrs. Veitch. In addition to the hybrids raised by intercrossing *G. purpureo-auratus* and *G. Gandavensis*, M. Lemoine has now some crosses from *G. Saundersii*, a Cape

Fig. 126.—Crataegus tomentosa.—See page 423.

An extremely handsome new Pitcher plant named *Nepenthes Curtisii superba* was shown by Messrs. Veitch, who won for it a first-class certificate. The pitchers are of bold yet elegant shape, with a broadly recurved, grooved rim of dark crimson, the rest of the pitcher being of the came color, copiously marked with irregular blotches of very pale green. Some of the pitchers measured nine inches long, and the plant is a vigorous grower. A good market Fern will probably be found in the new *Pteris tremula Smithiana*, which has every frond

species, having large flowers, with hooded sepals of a bright scarlet. It is as hardy as *G. purpureo-auratus*, and, therefore, was well calculated to yield progeny possessing vigor of growth and hardiness. These Saundersii hybrids he has named *G. Nanceianus*, and two sorts were considered worthy of awards of merit. One was called President Carnot, with flowers four and a half inches across, and of a bright scarlet-red, the other, Comte Horace de Choiseul, with crimson flowers, freckled with white. Both are superb varieties, and will

certainly become popular. Of the other class of hybrids (those from *G. purpureo-auratus*) there were numerous sorts shown, three of which, named André Chenier, Alsace and La France, were distinguished by awards, while another, shown by its English raiser, and named Hippolyta, was also voted an award of merit. It has large and perfectly-shaped flowers of lemon-yellow, blotched with maroon-crimson. The growth is vigorous, and the spike long and massive. Next in interest were the double Begonias of Messrs. Cannell, who showed a really wonderful group of seedling plants, all raised from seed in February of the present year. The remarkable point about these seedlings was the very large size of the blooms, which looked more like double Hollyhocks than Begonias, so perfect were the rosetted blooms. Some may think they are too big, and perhaps so, to be really beautiful, but the amateur is always asking for larger and larger blooms, and so the business of the florist is to produce them. The colors of these new double flowers are exquisite, soft, yet brilliant, and one could trace almost every intermediate gradation of tint from a rich deep crimson through the palest of pinks to snow-white. The sorts to which awards of merit were given were named Litkie, pale salmon-pink; A. Blanc, rich cherry-crimson; Mrs. Cayzer, bright rose. Though only three won distinction, there were others equally fine, but the committee do not like to be too liberal with awards.

The Java Rhododendrons of Messrs. Veitch are always admired, and, now the firm whose peculiar specialty these greenhouse shrubs are, have taken to show cut blooms in boxes like Roses, so numerous have the sorts become. It is not often now that anything special is obtained in the way of color, but on this occasion they showed one, called Duchess of Fife, of a singular color—pinky-cream, I heard it described—while the large blooms were perfect in form as well as large in truss. This race of green-house plants is becoming extremely popular now, as they do not require much heat to grow them to perfection, while they yield flowers almost throughout the year, in winter especially.

There was a first-rate new Chrysanthemum called Golden Shah, which the experts on the committee considered worthy of an award, as it is said to be finer than any other yellow early-flowering sort. It is dwarf, perfect in bloom, and in color bright and good. The crowds of new Dahlias exhibited sufficiently proves that the demand for them is as great as ever. I will not attempt to describe even those that struck me by the distinct colors or other novel point. Only two were certificated, as the committee are very careful now in dealing out awards to new Dahlias. Both were single, one, called James Scobie, is warm yellow, with a centre zone of crimson—a distinct break in color; the other is yellow, flaked and pencilled with scarlet. Single Dahlias seem to have had their day of popularity, the rage now being for Cactus-flowered sorts of the Juarezii type, and here were to be seen from such great growers as Ware and Cheal some beautiful sorts in color different to any shown before. Those I made special note of were Panthea, Charming Bride, Zulu, Empress of India, all first-rate. But we shall see Dahlias better later, when other things are less engaging. A firm of market-growers, Messrs. Hawkins & Bennett, think they have obtained the perfection of a double scarlet Pelargonium for the market-grower. This they call the Duke of Fife, with massive truss of brilliant scarlet and very double, and, lest it should be thought that it too much resembles that well-known and first-rate sort, F. V. Raspail, they showed some blooms of the latter for comparison. The Committee believed in it, too, for they voted an award of merit.

London. *W. Goldring.*

Cultural Department.

A Few Late Pears.

THE Abbott is a good pear for family use, though not much grown. It is a little smaller than the Bartlett in size, with a nice blush on the sunny side, and people who dislike the musk of the Bartlett would prefer the Abbott. The tree is a strong grower and yields well. Its merits have been overlooked.

Belle Lucrative is a pear of medium size and excellent quality when well-grown. It is an abundant bearer, and, if allowed to do so, will over-bear, to the detriment of the fruit, both in size and quality. The skin of the fruit is an unattractive green, and for this reason, among better-looking pears, it is apt to be passed without notice, but its buttery, juicy flesh amply compensates for any lack of good looks.

Golden Beurre is of medium size, and in appearance directly the opposite of the preceding, while approaching it in quality. It is an abundant biennial bearer, but, for some reason, has not achieved great popularity.

Flemish Beauty is another large and exceedingly delicious pear, and of almost honeyed sweetness at its best, but it cracks and spots so badly over a large extent of territory, that it is absolutely worthless except in limited areas.

The White Doyenne or Virgalieu, with a dozen other names as synonyms, used to be the standard of excellence of the whole pear family, and would be to-day if it could be grown as well generally as it was forty years ago. At that time it was the pear of pears in the farmers' estimation in this part of New Jersey (but this was before the advent of the Bartlett or Williams' Bonchrétien, as it was sometimes called), but it also became subject to spotting and cracking, and is now so absolutely worthless that it is seldom seen, and is unknown to most of our younger people.

Howell, a large, handsome, light yellow pear, a good grower and bearer, is highly esteemed by many, but I never considered it quite good enough for a standard dessert fruit.

Louise Bonne de Jersey, where it succeeds, is a noble fruit, of buttery texture and juicy, but in this section it is gritty, astringent, and only fitted for cooking purposes. Of late years it has developed the fault of shedding its leaves so early that the fruit is seldom more than two-thirds grown, so that it is difficult to imagine that it could ever attain the degree of excellence which it reaches when grown in perfection.

Angouleme, or Duchess, as it is popularly known, is of the largest size and best quality, if well-grown; if not, it is just the reverse. The larger the specimen, generally, the better it is. The flesh is coarse-grained, but juicy, sweet and delicious; one of the most popular pears grown, after the Bartlett, and more largely grown as a dwarf on Quince-root than any other. It must have congenial soil, however, and high culture. On my soil, as a dwarf, it is like other dwarfs, of little account. It is said to prove satisfactory as a standard, but I have no experience with it as such. There are few advocates of dwarf-Pear culture left. The few successful orchards of dwarf-trees, are those which have rooted from the graft, and have become standards in fact.

Anjou is another large, popular pear of very good quality, when in perfection, and it will keep till November and December in good condition, if properly cared for. The tree is one of the best in health, foliage and growth, and should be in the smallest collection. This was Colonel Wilders' favorite.

Buffum, a pear of medium size and fair quality, is one of the most healthy, vigorous growers in the whole list, and an abundant bearer every other year. Sometimes the fruit is rather under-sized from over-bearing, a tendency in all pears, and some years, too, it is less juicy than others. It is then excellent for cooking. With approaching ripeness it assumes a yellow and handsome appearance.

Bosc is a long, slender-necked russet pear of the highest excellence, sweet and rich. The tree is a poor, open grower while young, and the fruit is borne singly or in pairs generally, and very evenly distributed. It is most satisfactory when top-grafted. This was Mr. Downing's favorite pear, and his judgment on this point seems to me eminently sound.

Clairgeau is a pear of the largest size, handsome and good, when in perfection. The tree is a fair grower and an early and abundant bearer, but it is liable to shed its leaves prematurely. When the foliage is held till October, and the fruit is fully matured, it ripens up handsomely, and the quality, to my taste, is much superior to that of the best Bartlett. This spotting and premature fall of our Pear-leaves is a more serious trouble with me than the fire-blight. The latter kills, and leaves no doubt as to the course to pursue, while the former leads on hopefully to certain disappointment in the end.

Sheldon, a round, russet pear of medium to large size, flesh granular, melting, sweet, juicy and aromatic, is a fruit of the highest excellence. The tree is a lusty grower and generally productive. It should be in the smallest collection.

Seckel is too well known to need description. The tree grows moderately slow, bearing its fruit in clusters, which should be thinned to single specimens, if possible. Its small size is its only fault.

Onondaga is a large, greenish-yellow pear of excellent quality. Tree vigorous and productive.

Lawrence is an American pear of great excellence. The tree is of moderate growth, very healthy and productive; the fruit of medium size, smooth, yellow at maturity when grown on young trees, but on old trees it is very apt to become cloudy or rusty. The skin is thick, flesh fine grained, buttery, sweet and juicy, and it will keep till Christmas with ordinary care, and, on the whole, is the nearest approach to a good winter pear I am acquainted with. The tree holds its foliage

with great persistency—a very valuable feature in any tree.

Winter Nelis is a small russet pear of excellent quality when well grown, but the tree generally loses its foliage early before the pears mature, and, therefore, they seldom reach perfection. The tree is a slow, slender grower, and should be top grafted on some more vigorous kind.

Dana's Hovey is among winter pears what the Seckel is among autumn varieties. The tree is a good, healthy grower, and produces fruit about the size of the Seckel, but better and more highly flavored. If it were only a little larger!

Sweetness is a prominent characteristic of most of the pears so far named. In Superfin we have an acid pear of large size, green at maturity, but sometimes ripening up a bright yellow. In the latter case the acidity generally becomes much modified and assumes a rich, vinous flavor that can hardly fail to please any palate not wholly partial to sweetness. Seasons and soils have much to do with the full and thorough development of this pear more so, perhaps, than any other. I have eaten it when I could desire nothing better, and again when it was disagreeably sour. Stewed or canned it is excellent, and needs no lemon or other flavoring as do the Bartletts and other sweet kinds. The tree is a good, thrifty grower and a fair bearer.

Diel is another acid pear of large size and very good quality when in perfection. The flesh is more coarse, and sometimes gritty and less acid than the preceding. The tree grows well and bears well. But the fruit sometimes cracks and the leaves fall prematurely, and we cannot expect trees that do not hold their foliage till the fruit is mature to produce that fruit in perfection.

Urbaniste is another large pear, in quality equal to any named; skin, smooth, greenish-yellow; flesh, melting, buttery, rich and juicy. The tree is a fair grower, but is not popular among dealers and planters because, like the Tyson and some others, it is tardy in coming into fruit. The old adage about planting pears for one's heirs is not regarded with favor by tree-planters now-a-days; they are in a hurry, and would like the trees to commence bearing at once. When one has old trees of undesirable kinds, a new head of Urbaniste could be grafted on and this excellent variety would soon come into fruit.

I have grown many other pears, but the list is long enough to meet the wants of an amateur. I have mentioned only the leading and most popular varieties now before the public, trees of which can be easily obtained. One who has a longing for the pears of his childhood had better get cions or buds and insert them in stock more easily obtainable.

And what about the Kieffer? Well, if one wants a handsome, strong-growing tree, and an abundant cropper of fruit for canning purposes, the Kieffer just meets his case, but as a table fruit it does not deserve planting. It is a valuable substitute for the quince, and, as it will produce fruit far more abundantly and cheaply, it is well worth planting for its excellence in taste and appearance when preserved.

A few trees on the smallest place can be made in a short time to supply a family with a great variety in sufficient quantity for all purposes, by making one tree yield several kinds of those least required. A little judgment in this direction would secure a greater variety, covering the season more effectually, and avoiding a useless and wasteful surplus of a single

Poet's Narcissus flowering in the grass.—See page 421.

variety, which is apt to occur when a tree gets into full bearing.

The pear is the easiest of all our fruit trees to graft successfully, and the merest tyro need not fail in so simple an operation.

Montclair. *E. Williams.*

The Wild Garden in August.

SEVERAL clumps of Clethra in my wild garden fill the air with their delicious fragrance, and *Clematis Virginiana* is one mass of bloom. A tall, cedar post was set in the ground, and crooked, gnarled Grape-vine stems were nailed to it, which makes a support for its leafstalks, where they can clasp and climb in all directions. Long, pendulous branches are drooping from every side, loaded with white blossoms, which attract numerous butterflies and other honey-loving insects.

A very showy Sunflower has been in blossom since the middle of June. I found it on an island on the New Jersey coast, some four or five years ago, where it attracted my attention with its wonderful amount of bloom. I have called it a form of *Helianthus lætiflorus*. But June is early for this or any other Sunflower to blossom. Its leaves are quite thin and smooth, not at all like the normal *H. lætiflorus*. It is now full of flowers, and will continue so until frost, and when I look at this beautiful plant I am not surprised that so many persons favor its adoption as the national flower. The Narrow-leaved, Pine-barren Sunflower (*H. angustifolius*) is just coming into bloom. This is also a pretty species; but to do well it must be grown in a damp spot, which can be easily secured in any desirable place in the garden by sinking a tub in the ground and filling it with good soil and keeping it moist. My plan is to get oil-barrels and saw them through the middle, thus securing two good receptacles from one barrel. After they are sawed I set fire to the inside and burn out the oil and slightly char them, which makes them last an indefinite time. Groups of many of our most charming swamp-plants can be grown in these tubs as easily as a Morning Glory at our window.

One of the most remarkable plants in my collection is a Rudbeckia. At the base of each ray is a dark-brown spot, making the flower very handsome. It was brought to me in a bouquet this summer, and the young lady collector, having excellent observing powers, could tell exactly where it grew. On going to the spot we found the plant held several flowers, all marked in the same way, so we carefully removed it and planted it in one of the tubs in the garden, where it continued in bloom a long time, attracting much attention. It grew in a swamp, and has undivided leaves and a dark-purplish disk, but, according to Gray, this division of Rudbeckia ought to grow on dry soil.

The white and yellow fringed Orchids (*Habenaria blepharioglottis* and *H. ciliaris* and *H. cristata*) are very beautiful through July and August. What is more attractive than a group of these plants in a half-shady nook, surrounded by low, cool-looking Ferns? This use of the sunken tub enables us to grow them in any desirable spot.

One of the most stately groups in my garden, among these wild swamp-plants, is of sedge (*Scirpus Eriophorum*). It is five feet in height, and each stem is surmounted with a large, graceful, drooping, umbel-like panicle of flowers. This sedge is lovely from April—when it first begins to throw out its long, rather broad, grass-like leaves—until November, when it is crowned with its persistent, drooping panicles of fruit.

The Arrow-head (Sagittaria) and Pickerel-weed (Pontederia) are among the bog-plants now in bloom. So is the bright orange-colored *Polygala lutea*, which flowers all summer. This species is the most showy of the Polygalas, and deserves a place in every garden.

Among upland plants the Eupatoriums are now quite showy with white and purple bloom. The Butterfly-weed (*Asclepias tuberosa*) is still brilliant with orange-red flowers, attracting hosts of butterflies. Many wild plants not in flower are lovely now in their mature foliage. The Sumachs are specially fine. The Staghorn Sumach (*Rhus typhina*) was stripped of its flowers in June by the almost omnivorous Rose-bug, but I never saw its foliage more beautiful than now, while the Dwarf Sumach (*R. copallina*) is strikingly handsome, with perfect, smooth, shining leaves.

The blossoms of the Holly met the fate of the Stag-horn Sumach, but the prickly leaves were left intact, and their shining verdure will be a joy during the winter. The Bayberry and Sweet Fern are still handsome with perfect, fragrant leaves, which one cannot help noticing in this season of unusual insect-devastation.

The smooth Alder (*Alnus serrulata*) and *A. maritima* are both handsome shrubs which grow finely in my garden, and the latter makes a small tree from eighteen to twenty feet in height. Their smooth, straight-veined leaves are as handsome as those of the Beech, which tree, to my regret, does not succeed in our soil, so the next best thing are these Alders, which grow luxuriantly and are attractive, even in winter, with their clean-looking bark and clusters of small, persistent, cone-like fruit.

Vineland, N. J. *Mary Treat.*

The Ismenes.

ISMENE is now considered to be simply a sub-genus of Hymenocallis of the Amaryllis family. It differs, however, from the rest of the genus to such a degree that the old name is likely to stand for a long time among horticulturists. It is very desirable that plants should be known by their right names, for correct nomenclature is necessary to intelligent gardening, therefore, though the name of the sub-genus heads this article, I shall call the species by their proper generic title. Counting *H. deflexa*, there are seven species. Of three of these I write from experience.

All of the Hymenocallis have a central cup surrounded by six radiating segments, the cup in sub-genus Ismene being very much larger proportionally than in the rest of the genus. All of the species are natives of the Andean chain, from Ecuador to Bolivia.

H. Macleana is a very pretty species. Its flowers are of a decided green color, and give the species a distinctness which is very satisfactory to those who prize individual character in plants as well as general effect. The flower-stalks are about twenty inches tall, and bear frequently as many as ten flowers, the average being about six. As in the other species, these do not all open together, but at intervals of a day or two, so that the same cluster often presents fresh flowers for nearly two weeks. This species increases very rapidly by offsets. Last autumn I selected twenty strong bulbs and stored them in a cellar where the temperature averaged 42°, falling occasionally to 38°. Dahlias and Gladioli, stored in the same cellar, are now doing well, but the bulbs in question, planted on the same day with the bulk of my stock, wintered under a green-house bench, were fully ten days later in coming up; not one bloomed, and they now present a stunted and feeble appearance. I conclude, therefore, that cool wintering is not at all to their taste. I have never been able to get good seed from this species, which is the *Ismene undulata* of catalogues.

H. calathina is a much larger plant than the foregoing in all its parts. In the whole range of summer-flowering bulbs I do not know a more noble and stately one. The large cup is white, a little marked with green; the flowers are nearly as numerous in the cluster as in *H. Macleana* and last as long; their perfume is very pleasing to most persons, though a little too strong if brought into a close room. The foliage is so green, vigorous and erect that a row or cluster of the plants is very beautiful even after the flowers are gone. By careful fertilization seeds may be obtained, which are of the peculiar bulb-like nature observable in those of Nerine, Brunsvigia and *Amaryllis Belladonna*. They are of the color of a pea a little too old to cook, and of very different sizes, the largest being the size of a sparrow's egg. They are best sown on the surface of a pot of earth without any covering. In a short time a shoot is sent out which turns down into the earth and presently sends up the young foliage. June is the flowering time of both these kinds.

H. Amancaes is also a remarkably beautiful species, its broad flowers being of a strong deep yellow, somewhat striped with green, and very fragrant. It is a rare bulb, rated at a high price in catalogues, and usually not to be had if ordered. With me it is late to start and late to bloom. At the present time, August 10th, it is less than a foot high and shows no sign of a flower-stalk. The seeds of this species often make no growth above ground, but form a bulb as large as a swallow's egg, with no foliage at all until the second year. A lemon-colored hybrid has been produced by crossing this with Calathina. The "Botanical Register" contains an animated account of the annual fiesta in Lima, when great throngs of people, on foot or horseback, go out upon the hill of Amancaes to gather the blossoms of this bulb and spend the day in amusements.

H. Quitoensis H. Andreana, *H. deflexa* and *H. nutans* are known to me only by figures and descriptions. They are all white-and-green-flowered, and not much unlike Macleana in general appearance. *H. deflexa* is ranked as a species by Mr. Baker, though it is a natural hybrid; Colonel Trevor Clarke has produced it by crossing *H. calathina* and *Elisena longipetala*.

Canton, Mass. *W. E. Endicott.*

Lemoine's Hybrid Gladioli.—With the early and brilliant Brenchley's Gladiolus, this new race comes into bloom. The value and beauty of these Gladioli cannot possibly be overrated, and the more I see of them the more I am convinced that they will in time usurp the place long occupied by the more delicate varieties of the Gandavensis race, which few can grow well. Lemoine's are hardier and more robust in growth, and though they have not at present that massiveness of spike which characterizes the best of the Gandavensis hybrids, they rival them in diversity and richness of color. This race owes its hardiness chiefly to its parent, *G. purpureo-auratus*, which is quite a hardy bulb with us, growing strongly and propagating itself with singular freedom. The other parent was one of the Gandavensis race, but now, as elsewhere stated, M. Lemoine has hybridized with *G. Saundersi*, which is another hardy species, with large, brilliantly-colored flowers. I have just seen a collection of the newest hybrids, and out of two dozen the following were in perfection of bloom and extremely fine: Sphinx, deep crimson, with lower petals blotched with velvety maroon; Lamartine, flowers very large, cerise crimson petals, with white blotches on lower petals; Boussingault, pale pink petals, flaked with crimson, lower petals half bright canary-yellow, and half blackish-crimson, a very striking sort; Deleuil's Zelie, mauve pink, lower petals, blotched with white; Gainod, like Zelie, but larger; Enfant de Nancy, very rich and deep crimson, lower petals maroon. Other sorts not past their best were Mars and W. E. Gumbleton, both choice kinds. All these have flower-stems ranging from two and a half feet to four feet high, the spikes carrying from ten to fifteen flowers. All have the characteristic hood-like flowers of *G. purpureo-auratus* and *G. Saundersi*, but this peculiarity is not so marked in the later as in the earlier hybrids, and no doubt M. Lemoine will in time produce varieties with flowers as large and open, and as dense on the spike, as the best of the Gandavensis race, which now they quite eclipse in point of color. *W. G.*

Kew.

Perennial Coreopsis.—These are among the best of hardy garden flowers as they require very little attention, reproduce themselves freely from self-sown seeds, and make a brilliant display from June until frost sets in. *C. lanceolata* has become in a comparatively short time one of the best known of the genus, and certainly no hardy plant produces more flowers throughout the season. Its large, bright-yellow flowers are of good substance, and stand well when cut. *C. grandiflora*, from the mountains of North Carolina, is equally good in all respects. The flowers are a trifle darker in color, more stellate, and the plant itself has a spreading habit. As soon as it begins to grow, *C. grandiflora* also begins to branch, so that, by the time the flowering period is reached, the smallest plant has become a dense bush some two feet in diameter. This plant deserves to become as popular as *C. lanceolata*. *C. verticillata* is a pretty species, with whorls of very narrow leaves, quite distinct from the preceding. *C. verticillata* is very floriferous, and a desirable plant. *C. delphinifolia* is a taller growing plant, well grown plants being often three or four feet high. The foliage, as the name implies, resembles that of the Larkspurs. The flowers are produced from the tops of the stems, and are quite showy, though not so large as those of the other species. *C. tripteris* grows from six to eight feet in height, and is suitable for the back row of the flower border, or for planting in shrubberies. The stems are clothed with elegant three-parted leaves, and just now the stems are surmounted by a branched panicle of very fragrant yellow flowers, the fragrance resembling that of the old English Wallflower. This plant may be effectively associated with Silphiums, *Helianthus orgyalis* and *Rudbeckia maxima*, all of which are of about equal height All the above species of Coreopsis are perfectly hardy and perennial, and they would probably be far better known, were they exotic, and less easy to cultivate.

Lobelia splendens var. Victoria is a plant that has often been catalogued and sent out as a variety of the Cardinal Flower, *L. cardinalis*, with which, however, it has no specific affinity. It is a variety selected from the Mexican plant *L. splendens*, and, it may be added, that as a decorative herbaceous perennial it has no rival, the dark, purplish, crimson foliage resembling in color the Iresines so much used for bedding purposes. The flowers are similar in color to those of *L. cardinalis*, but they are three times the size. For fall effect there are few plants to equal this Lobelia, especially when planted in masses, or associated with some plant of variegated foliage. I once saw a large circular bed of this Lobelia intermingled with the variegated *Abutilon Thompsoni*, and the effect was charming. The hardiness of the Victoria Lobelia is not sufficient to warrant its being left in the open ground in the eastern states. The crowns need lifting, and require protection from severe frost during winter. In spring these may be divided and replanted in the position they are to occupy during summer. Any one obtaining this plant as a variety of *L. cardinalis* would be led to suppose that it required a moist soil and situation, while, as a matter of fact, this would be extremely injurious. *L. splendens* needs a rich dry soil. The variety in question comes fairly true from seed, but its germination is somewhat erratic. We have found that plants may be looked for anywhere between six weeks after sowing and the end of the succeeding eighteen months. *E. O. Orpet.*

Passaic, N. J.

Odontoglossum Schlieperianum.—This Orchid should find a place in every collection on account of the beauty and size of its flowers. Its nearest affinities are *O. grande* and *O. Insleayi*, to the latter of which Dr. Lindley considered it to be so closely related that he gave it the varietal name of *macranthum*, because the flowers were much larger than in that species. *O. Schlieperianum* has dull-green, ovoid, compressed pseudo-bulbs, each bearing two broadly lanceolate leaves, about five or six inches long. The flowers are usually borne in June on strong, sub-erect scapes; the oblong-ligulate sepals are of a bright lemon-yellow, covered with transverse blotches of reddish-brown, except at the slightly recurved tips; the petals, which are broader, and somewhat abruptly narrowed at the base, are of the same color as the sepals, but have a few reddish-brown blotches on the lower portion only. The oblong-obovate, emarginate lip is pale-yellow with chocolate bars at the base, while the conspicuous bright-yellow crests are spotted with crimson. Like most Odontoglossums, this species requires to be potted in a compost of peat and sphagnum moss, and should be placed in a rather warm corner of the house, as it is a native of Costa Rica. Water may be freely given during the growing season, which takes place after flowering, but must be greatly diminished during the winter months, when the plants are at rest.

The earliest notice of this plant appears to be in 1856, when it was sold in Covent Garden, London, with other Orchids from Central America. It flowered for the first time in Europe in the collection of Herr Schlieper, of Elberfeld, Germany, in honor of whom it was named.

Vanda teres.—For the last three weeks several plants of this species have been flowering one after another in quick succession, and the beauty of their flowers and peculiar appearance present an aspect quite distinct from other members of the Orchid family. With the exception of the beautiful *Vanda Hookeriana* and *V. teres*, most plants of this genus have distichous, strap-shaped leaves, some being very long, and others very short in proportion. *V. teres* has quill-shaped stems and leaves of a dark-green color, and a climbing habit. Two flowers are generally borne on a short raceme springing from the side of the stem opposite the leaves. The sepals are oblong-obtuse, the upper being generally erect and nearly at right angles to the roundly-ovate petals. Both sepals and petals are creamy white, tinged with pink or magenta, which color is usually much more intense on the petals than on the sepals. The lateral lobes of the handsomely-colored lip are folded over the column in the shape of a helmet; the middle lobe is spreading in front, where it is cut into two obovate divisions, and in connection with the two side-lobes forms a large conical spur at the base. The throat is orange-yellow, with radiating lines of crimson spots on each side, while the surface of the middle lobe is beautifully veined and washed with rosy magenta. There are several varieties of this species, which can only be distinguished by the color of the flowers.

It is not very difficult to grow *V. teres* successfully, provided that it be grown in a house with a warm and moist atmosphere, in a position exposed as much as possible to the rays of the sun. Here the plants are grown in a compost of peat and loam, with silver sand mixed, and all planted out close to the glass. During this warm weather they are syringed several times during the day, and receive a liberal supply of water at the roots also. Very little shading is given except when very hot. The plants may also be grown on blocks of wood with equal success, and placed in a pot three parts filled with charcoal, and covered with a layer of sphagnum moss, receiving abundance of water during the summer months, but much less in the winter, when the temperature for this species should be about 65°–70° Fahr. during the day, and from five to eight degrees lower at night.

Dr. Wallich introduced this Vanda from Burmah in 1826, but it is not, however, confined to this region, having been

sequently found in Khasya, Sylhet, and other parts of India, where it has been nearly always found growing on branches of trees exposed to the sun's rays. About ten years from this date it flowered for the first time in England in the collection of the Duke of Northumberland, at Lyon House, opposite the Royal Gardens, Kew, from which this place is divided by the river Thames. Now that the requirements of this species are better understood it is becoming much more popular than in former years, and a specimen of it will now be found in nearly every collection.

St. Albans, England. *John Weathers.*

Correspondence.

An Interesting Wildwood.

To the Editor of Garden and Forest:

Sir.—Overlooking part of Lake Superior, the Nemadji Valley, the Bay of St. Louis, Fond du Lac and the Dalles of the St. Louis, from the north, are prominent and breezy terraced bluffs (some five hundred feet high), mantled with dense groves of Sugar Maple and Yellow Birch, with an occasional giant White Pine. From deep fissures in trap, gabbro and granite many little streams of cold, clear water trickle and tumble over mossy rocks, shaded by Vine Maple, Thimbleberry, Alder, Birch and Arbor Vitæ, through deep glens and park-like openings to the river and bay.

Shady groves on natural terraces, deep, clear pools with darting trout, or extensive views and fresh lake breezes are here at option within a few minutes ride of Duluth, a city notably barren of trees and shade.

This could have been said twenty years ago.

To-day, though not destroyed, this remarkably attractive strip of wildwood is marred. Pine and other timber have been cut; fires are killing bushes, uncovering streams to the sun, warming them and making them impure, while dead and blackened trees are standing as monuments of the past and warnings for the future.

During July and August of this year I have learned to value this varied wildness, because it has no equal short of the great mountain chains or some rocky sea coast, and because a quarter of a dollar car-fare and a short walk and scramble will furnish any one a lift out of and above the ruts of life.

Speculators have bought some acres in this region, seeing value in them for parks and pleasure-grounds. On one of these tracts recent cutting was noticed, with Pine-tops and broken hard-wood lying so thick as to kill most, if not all, the Birches and Sugar Maples left if fire should get in. Inquiry developed the fact that the owner, a speculator of Duluth, was holding the land for country residences and a park, yet he permitted a contractor who wanted piling to go there and cut as suited him, leaving the tract with anything but a pleasing appearance, and in great danger of being made worthless by fire.

The lesson I would draw from this is, that, while it may be for the best interest of holders of beautiful woodlands to keep them as woods, they are often unable to keep them, while many do not know how to keep them if they would. Yet the people should not loose the privilege of the woods, nor have to pay too much for the privilege. If men with capital to buy such tracts, and the knowledge to improve them, do not appear, then it is the duty of the men chosen by the people to look out for their interests to see that the benefit of such restful resorts are not lost.

Duluth, Minn. *H. B. A.*

Trees Which Shade Dwellings.

To the Editor of Garden and Forest:

Sir.—How near a country-house is it safe and desirable to have Elm trees growing? I have recently purchased a house, the front piazza-steps of which are flanked on either side by a noble Elm about fifty feet high. Both trees have branches overhanging the house, and although it is situated on high ground, and in a location not exposed to dampness, still there is cause for much complaint on that score, and I am inclined to ascribe it to the proximity of the trees. I may add that both trees are sorely afflicted with the Elm-beetle. As a result the lawn is littered with dead leaves, and the Elms are, to all appearances, dead in midsummer. I saw the remedy for this beetle in Garden and Forest for June 19th, too late to profit by it this season. Being reluctant to cut down two such beautiful trees, even under the above provocation, I respectfully ask your advice.

Yonkers, N. Y. *H.*

[Trees standing near a house, and especially on its south side, may obstruct the light and check the breeze to an unpleasant and, perhaps, an unwholesome degree, and the lack of sunshine and ventilation would naturally aggravate any tendency to dampness in the house. The evil effects of trees in this respect are often exaggerated. This summer has been exceptionally humid, and even unshaded houses have been "damp." The Elm is usually a tree of open habit, so that it would offer, as a rule, comparatively little obstruction to ventilation. If the trees in question have been defoliated by the beetle they can do little harm this year. But, after all, no positive counsel in a particular case can be given until the premises are examined. If the trees are well placed, so far as the appearance of the "house-scene" is concerned, we should allow them to remain another year at least.—Ed.]

The Asparagus Beetle.

To the Editor of Garden and Forest:

Sir.—I observe that you recommend arsenites for destroying this pest, but Paris green has failed with me to check the beetle. I planted this year 3,000 roots, imported from Erfurt, and the beetle has made havoc with the plants in spite of lime, sulphur and other remedies. When Paris green was prepared for spraying the Potatoes I directed my men to spray half a dozen rows of the Asparagus plantation. A strong solution was used, and I expected to see both plants and beetles destroyed; but the plants were uninjured, and beetles and larvæ seemed to be enjoying the best of health.

My children have picked 500 to 600 beetles two or three times a week the whole season through, but the enemy is still here, though I think less numerous.

New Rochelle. *W. K.*

[There is the difficulty of making arsenites adhere. We tried London purple this spring in a very fine spray, but most of it dropped off and very little poison remained. Where it did stick, it killed larvæ and beetles both. The best way of applying Paris green is to dust it on mixed with plaster or some other vehicle. The work should be done while the plants are wet with dew in the morning. Asparagus is hardy, and there need be little fear that the arsenic will burn it. Contact-killing powders destroy the larvæ or slugs, which, after all, do most of the damage and provide for future beetles. Pyrethrum acts very quickly when put on with a bellows, making a cloud of fine dust—but it is expensive; White Hellebore is good, but it acts more slowly and less certainly; Tobacco powders act rapidly and certainly, and a cloud of Tobacco dust blown over the plants once a week ought to be useful. It will kill nine out of every ten larvæ on the plants and will drive away all the beetles; the latter will return and lay more eggs, but the enemy can be held in check. The beetles may very easily have been imported with the roots for our correspondent's plantation. The larva pupates in the ground by the roots, and the beetles often creep in there to hibernate.—Ed.]

Recent Publications.

Japoneries d'Automne, by Pierre Loti. Paris: Calman Lévy. 1889.

Nothing is more difficult than to conjure up in words a vivid picture of unfamiliar lands. It can be done by no mere accumulation of facts general and particular, of statistics comprehensive and minute, of features great and small, of prosaic impressions abiding or transitory. How many big, instructive books we have had about Japan, and how litttle we know how the land would appear to us should we go there. Every traveler tells the same tale: he starts out equipped with what he thinks an exhaustive knowledge of the country, lands in a spot as strikingly unfamiliar as though he had never heard its name, and the longer he stays grows the more bewildered and surprised. Then he comes home and writes a book which shall really open in advance the eyes and minds of his successors; and then they follow in his track with an experience just the same as his.

But all this is because most men are *prosateurs* by nature, and merely reveal the fact more plainly when they set their pens to work. If they are intelligent, they learn facts wherever they go; if they are stupid, they think they do. But in

either case they do not receive real impressions, or they lack the power to convey them to others. Once in a while, however, comes an artist—a man born not merely to see but to feel, and dowered with the gift of adequate expression. Then, if his craft be painting, he shows us more than all the maps and diagrams and faithful prosaic paintings of generations have shown; and if his craft be writing, he tells us more than all the learned students and careful statisticians who had gone before him.

Such an artist is Pierre Loti, a young French naval officer, known in common life as Monsieur Julien Viaud. No one had heard of him until a few years ago, when he published the "Roman d'un Spahi," dealing with Algerian life, and the "Pecheur d'Islande." He was not a writer by profession, but merely a born artist who had chanced to take to the sea, and now, inspired by strange foreign sights, showed himself at once a master in the art of writing. To say this is to say very much of a Frenchman. Almost every Frenchman is a born writer, as compared with Englishmen or Germans. A literary gift seems his by birthright, and when he does what would make instant fame for a man of any other modern race, he merely does what his countrymen expect of him if he dares to put his pen to paper. To say that the charm of Pierre Loti's style instantly gained him a place among the best of his contemporaries means, indeed, that he possesses an extraordinary talent. More than once before he published this present book he had spoken of Japan. But in "Japoneries d'Automne" (one must coin a word in order to translate and say "Autumn Japanesques") he gives us something more delicious than even "Madame Chrysanthème." It is but a little volume, a brief rambling account of an autumn ramble through a few districts familiar to every tourist. No one need turn to it who wants "information," much less statistics. Yet any one who wants to know how Japan appears had better turn to it than to anything else which we could cite. Pierre Loti's mood is that which has been cleverly called "detached sympathy"—the best of all moods for the non-scientific tourist. He neither tries conscientiously to put himself in the mental and emotional shoes of a Japanese, nor to don the shoes of a European bent upon understanding the point of view of Europe by the contrasts offered in Japan. He simply sees and feels with gay spirits, keen perceptions, a humorous delight in every oddity, and a genuine artistic enthusiasm for every charm. His impressions are incomparably fresh and vivid, and he reports them with incomparable vivacity, wit, good humor and literary skill, and, as an element in this skill should be noted, a brevity even beyond that which marks almost all French descriptive writing. It is impossible to translate any passages from his book; he is too Gallic in style to be anglicized, even with as much success as one may translate such writers of an earlier day as Gautier. All we can do is to point our readers to the little volume, assuring them of a couple of hours' intense amusement, and a clear, abiding picture of Japan to hang in the gallery of their recollections. Of course, there would be no reason to do even as much as this in these columns had Pierre Loti not spoken of the gardens of Japan; but some of his most delightful chapters are devoted to them, and, though his treatment is superficial in the sense of being neither scientific nor categorical, he gives us a more interesti ing and more illuminative account of the Sacred Mountain o Nikko and the tombs of the Samourais than any one who had preceded him in these well-worn paths. Reading other writers we learn what there is in these places; reading him we learn how it all looks and what the sensitive Occidental feels as he is looking at it. The difference between the two results is immense, and Loti's we get through an hour or two of pleasure instead of through days of wearying study. This it is to be an artist. When will one arise to do the same service for those who read English only?

Meetings of Societies.

American Florists at Buffalo.

THE late meeting at Buffalo proved the most interesting yet held by the society. The attendance was full and the proceedings earnest and business-like from beginning to end. President May argued that more spirit should be infused into exhibitions to make them educational influences, and to the same end he counseled members to report their experience in the horticultural press. He also showed the advantage of raising new seedlings in America as more likely to give satisfaction than imported novelties.

Mr. W. C. Barry, in his essay on "Roses for Garden Decoration," said that of 334 varieties sent out in 1887 and 1888 there were only fourteen which he considered worth cultivating in this country. He named, among those of conspicuous merit, Sir Rowland Hill, Madame S. Rhodocamachi, Vicks Caprice, Bonait, Max Singer, and the new hybrid, *R. Rugosa*, Georges Bruant, which has cream-colored flowers, borne in trusses of six to eight. He also mentioned, as likely to prove of great value, Mrs. John Laing, Dinsmore and Blanche Moreau, an almost perfect pure white Moss Rose.

Mr. Robert Craig, in an instructive paper, said that in the florists' business, as in other business, it was the specialist who won success. Boston and Philadelphia had been highly favored, as private persons had endowed their hortilcultural societies with fine buildings, and to this fact was largely due their high standing. He spoke in favor of the establishment of horticultural halls in every city, and urged the construction of a national botanic garden. Mr. John Thorpe advocated the establishment of an experimental garden for comparing varieties and species of plants, for testing various fertilizers and florists' seeds for making trials of insecticides, and pursuing investigations in every branch of horticulture. A business representing more than $3,000,000 of capital and directly occupying the attention of 150,000 people, should be entitled to some governmental support. The result of this paper was a committee appointed to bring the matter before Congress. A paper on "Useful Summer-flowering Plants," by Mr. A. E. Whittle, of Albany, advocated the planting of many varieties of hardy plants for the decoration of American gardens.

Mr. Forstermann's essay on the "Habitat of Various Orchids" had a practical value in suggesting the proper temperature needed for their successful cultivation. For example, Phalænopsis houses are often kept at a temperature of from 80° to 90°, while in their native state they flourish in a climate which ranges in the growing season from 70° to 80°.

Other papers of importance were read by Edwin Lonsdale and H. H. Battles, of Philadelphia.

Mr. Wm. McMillan, Superintendent of the Buffalo Parks, read a paper on "Landscape-Gardening," from which we quote some of the opening passages. In a future number we hope to add further extracts from this paper, which was received with many marks of approval, and contained much sound doctrine.

"An ornamental landscape is not merely a composition of choice trees, shrubs, grass and flowers, but includes as well every inorganic element of Nature embodied in the scene. The "lay of the land"—to use a familiar phrase—is in a double sense the ground-work of the composition. This includes every form or feature which the earth's surface presents to us, from the flat plain to the beetling cliff; every variety of hill and vale, ridge or dell, bare rock, sterile sand, or rich soil; and also water, flowing or still, of whatever volume, large or small. Even the atmosphere must be included as a part of every landscape, for the scene varies with every variation of sunshine or shade, dim haze or clear sky, still air or stirring breeze. The lights and shades of a landscape-painting are carefully studied, and whatever is appreciated in the copy is surely of greater value in the original.

"In the embellishment, then, of any grounds of sufficient extent to have a distinctive landscape-character, the gardener must take into account all the impressive and attractive natural elements of the place. The general aim of his work will be to make a harmonious combination with the dominant characteristics which Nature has already stamped upon the site. He will seek a fuller or richer development of the essential leading features, simply softening what is hard, clothing what is bare, filling out what is meagre, and enriching what is beautiful, all in harmony with the original type. He will thus avoid all novel conceits, all conspicuous eccentricities, all incongruous intrusions, and be guided by his understanding of the laws of Nature as enacted by the ruling Divinity of the scene, and his sympathy with them.

"I lay special stress on this fundamental principle, because it seems to be so commonly overlooked or ignored in ordinary landscape-gardening. In fact the very opposite rule is followed in much work that is done, and the result receives much popular approval. It is a common thing to value the decorative work on any given site in general proportion to the degree in which it is obviously artificial, new or peculiar. This unfortunate fashion seems to pervade every branch of landscape work. Instead of the artificial being subordinated to the natural, it is made specially prominent, and in some cases it even becomes the 'be all and end all' of the scene. For instance, drives and walks are made unnecessarily broad, or sinuous, or prominent, or intrude where not needed. A sharp terrace is formed mainly to display its bold lines, or a channel is dug for an artificial runnel, to give occasion for introducing

a bridge. Summer-houses, arbors, rockeries, pools, fountain basins and jets (usually dry), clumps of trees and shrubs, or beds of flowers and foliage plants, are stuck around promiscuously in conspicous sites, without any fitting relation to the natural conditions of the landscape.

"A common phase of the same taste is shown in the popularity of the class of plants which propagators call 'sports.' This includes that numerous list which pads out the pages of most catalogues, the endless varieties with the leaves abnormally shaped or colored, or with a drooping or contorted or dwarfed habit of growth. Nearly all the plants of this class are less hardy and vigorous and healthy than the normal type. It is probable that their peculiarities in color or habit are due to some unhealthy condition of the sap or defect in the channels of circulation. But in spite of this relatively weak growth, sickly color or deformed shape, they are all popular favorites. The paler and feebler and more distorted the growth, the more they are liked and petted and pampered. A few of the best of this class may be sparingly planted as foils or specimens or curiosities merely, but never in proportions to rival those of the true type of each species. For general use the natural color and shape are more pleasing and satisfactory, not only because more vigorous and durable, but also because they are in accord with the true order of nature, while the others are not. Nature, in fact, disowns her 'freaks' of this sort by the general sterility of such offspring. Their reproduction depends wholly on artificial propagations. It were better to let them all die a natural death than to treat them as if they were Nature's finest productions. Her sanction to their continued existence is given only when the seed, if produced at all, is true to the parent.

"On strictly private estates, where chiefly the eye of the owner is to be gratified, he may ride to his heart's content any hobby that may please him. But in places exposed largely to the public eye, as in ordinary villa grounds, suburban gardens and public parks, novel ideas will be introduced modestly and not generally adopted till they have stood the test of the fullest criticism. This means more than the ready applause of the populace which mere novelty, if daring enough, is sure to elicit; more than the hotbed stimulus of fleeting fashion, however popular for a time."

Notes.

It is estimated that the forest-fires which have been raging in Montana for the past four weeks have caused a loss of at least $100,000 a day.

Tigridia Pringlei, which was figured in this journal nearly a year ago (vol. i, p. 389), has bloomed this year at Kew, and its flowers of fiery scarlet and orange were considered very striking.

It is reported in a bulletin of the Florida Experiment Station that the annual Crimson Clover (*Trifolium incarnatum*) promises to be profitable in that state as a winter pasture plant, as material for ensilage and for dry forage.

Several correspondents have sent us the browned leaves of the Horse-chestnut, with inquiries as to the cause. The disease is the work of a fungus, *Phyllosticta sphæropsoidea*, and it seems unusually prevalent this year. It is difficult to suggest any remedy, because the fungus, as now known, is an imperfect form, and we are unable to tell what its perfect condition is.

The leaf-blight of the Pear and the cracking of the fruit is caused by a minute fungus known as *Entomosporium maculatum*. Professor Halsted writes to the *Rural New Yorker* that the spraying of some copper sulphate mixture upon the trees in early spring may help to arrest its ravages, although this has not yet been demonstrated. The National Department of Agriculture promises to publish soon the results of some hopeful experiments in overcoming this disease.

The Cassava, which has already become a standard product in Florida, is now on trial in several parts of Louisiana, and Mr. J. L. Normand reports in the *Southern Cultivator* that it thrives and produces wonderfully in the latter state. In his judgment it will yield more to the acre than any other article of food. Many nutritious and delicate dishes for the table can be made from Cassava, while as a food for domestic animals —cattle, poultry, sheep and swine—it is invaluable in that region.

The Governor of South Carolina has appointed the following gentlemen to represent that state at the annual meeting of the American Forestry Congress in Philadelphia, October 15th to 18th: Hon. A. P. Butler, of Columbia; Dr. F. P. Porcher, of Charleston; Professor H. A. Green, of Chester; Hon. Walter Hazard, of Georgetown; H. E. Buist, Esq., of Greenville. The Governor of Ohio has appointed Hon. John B. Peaslee, of Cincinnati; Hon. Leo Weltz, of Wilmington; Hon. James Poindexter, of Columbus, and Hon. Adolph Lene, of Cincinnati.

The exhibition at the late meeting of the florists in Buffalo, was larger and more interesting than any former one. Some remarkably fine and distinct colored Asters, new Dwarf Cannas, Hybrid Tropæolums and Tuberous Begonias, together with numerous Palms and Ferns, and a collection of Orchids and Stove plants were greatly admired. The mechanical part of the exhibition was full of interest, the greatest competition being over the hot-water boilers. Twelve patterns were shown, some solely for hot water, others for steam, and others again could be used for either hot water or steam. The "Standard flower pot" which was adopted at the meeting in New York, seems to have been generally accepted by all the flower-pot makers in the country.

Last week many of the leading fruit-growers of the middle states and New England visited the nurseries of Stephen Hoyt's Sons, at New Canaan, Connecticut, to inspect the new Green Mountain Grape, which has been introduced by that firm. The vine is a strong grower, and bears abundantly large, shouldered clusters of white, or rather green, grapes, which are among the earliest to ripen. The berries are rather small, flavor good, and skin very thin. Considering the fact that this is a bad year for the vine, and that the soil and climate about New Canaan is not favorable to grape production, the visitors were favorably impressed with the quality and promise of the variety, and feel confident that it will prove a valuable addition to the list of earliest grapes.

An interesting exhibition of Tomatoes was on view at the seed warehouse of J. M. Thorburn & Co., in this city, last week. Eighty varieties were named, and although several of them were plainly duplicates, the diversity of form and color and texture was so marked that some fifty distinct types could be recognized. The smooth outline and solid flesh of some of the newer varieties, like Thorburn's New Jersey, proves what can be accomplished by patient selection; and yet the tomato which, perhaps, showed the most compact and yet the finest texture, was Ignotum, which, as its name implies, is from absolutely unknown parentage. The Peach Tomato, so called from its resemblance to that fruit in size, shape, color and even in an incipient down upon the skin, was a novelty to most visitors, and so was another variety known as the Station Tomato, because produced on the grounds of the New York Experiment Station by hybridizing the upright Tree Tomato with one of Livingston's varieties. The plant is upright, producing a fruit of fine quality, which begins to ripen much earlier than either parent.

A correspondent of the *Gardeners' Chronicle* observes that while many bulbs like the Emperor Daffodil are of inferior quality the first year, and gain strength the second season, other bulbs deteriorate, and especially the Tulip, for this reason: The outer coat or skin of the Tulip is exceptionally hard and tough, and does not readily decay, as do others with softer skins; and, further, their mode of increase is so rapid—for a fair-sized flowering bulb will produce in some varieties three and four "chickens" in one season, though all are not equally prolific—that the offsets, being encumbered by these hard skins, have not the chances of putting forth their roots into the soil and are thereby crippled; the bulb does not make half its growth, and a general weakness is the result. Thus it is that we see clumps of Tulips which have remained undisturbed for several years, producing, it may be, one or two sickly flowers where dozens might have been, if they had been annually lifted, cleaned and replanted. Next to the Tulips the English and Spanish Irises are, perhaps, the most liable to deteriorate when left undisturbed in the ground for a year or two. The coats of skin upon the bulbs are very thick, and to keep the bulbs in good health for any length of time they should be annually lifted, cleaned and replanted with as little delay as possible. Erythroniums are benefitted by lifting every second or third year, as by this time they become crowded and require separation. Lilies may, if in good health, be left for an indefinite period; but where replanting is deemed necessary, it should be done as soon as flowering is complete, because it is just at this time that the new basal roots are emitted, and to preserve these intact should be the aim of all cultivators.